

IN THE CLAIMS:

1 (currently amended): A method to remotely control the electrical pulses supplied to a nerve tissue by an implantable[ed] neurostimulator, using a mobile device capable of communicating and exchanging data over a wide area network, comprising the steps of:

providing an implantable neurostimulator comprising circuitry, at least one lead adapted to be in contact with nerve tissue, and coil for communication; wherein said implantable neurostimulator comprises an implantable pulse generator module and a stimulus-receiver module that receives external stimulus signals and is capable of applying said electrical pulses independently of said pulse generator module;

providing an external interface means for networking over a wide area network to exchange data, and in communication with said implantable neurostimulator;

providing software applications means to said mobile device to communicate and exchange said data;

establishing a communication connection between said mobile device and said implantable neurostimulator via said external interface; wherein said communication may be initiated by a physician or a patient;

interrogating said implantable neurostimulator;

transmitting new programming information or data related to neurostimulation programs; and

updating said transmitted information on said mobile device or on a remote computer using said mobile device,

whereby said remote mobile device controls said implantable neurostimulator.

2 (previously presented): The method of claim 1, wherein said external interface further comprises an external stimulator inductively coupled to the said implanted stimulator.

3 (previously presented): The method of claim 1, wherein further said remote mobile device is at least one of a modified PDA/cell phone, a desk top computer, a lap-top computer, a pocket PC/cell phone, a hand-held device.

4 (previously presented): The method of claim 1, wherein said data exchange is exchange of data relevant to nerve stimulation patients comprising, patient history, nerve stimulation parameters, stimulation schedules, patient reports, patient contact information, and patient insurance information.

5 (previously presented): The method of claim 1, wherein controlling remotely said electric pulses, comprises at least one of monitoring, interrogating, programming, or scheduling said pulses.

6 (previously presented): The method of claim 1, wherein said data exchange and remotely control of electrical pulses supplied to a nerve tissue are for providing therapy for at least one of neurological, neuropsychiatric, urological, cardiac disorders, or intractable pain treated by spinal cord stimulation.

7 (previously presented): The method of claim 1, wherein said remote mobile device further comprises software to store, edit, add, download, or upload said data.

8 (currently amended): A method of communicating and exchanging nerve stimulation patient related data, remotely over a wide area network for at least one of monitoring, [and] or programming an implantable neurostimulator nerve stimulation device comprising the steps of:

providing an external interface means for networking over said wide area network;

providing said remote mobile device with means for networking over said wide area network; and

providing software application means for exchanging said nerve stimulation patient related data;

establishing a communication connection between said mobile device and said implantable neurostimulator via said external interface; wherein said communication may be initiated by a physician or a patient;

interrogating said implantable neurostimulator, wherein said implantable neurostimulator comprises an implantable pulse generator module and a stimulus-receiver module that receives external stimulus signals and is capable of applying said electrical pulses independently of said pulse generator module;

transmitting new patient information or data related to neurostimulation programs;

updating said transmitted information on said mobile device or on a remote computer using said mobile device; and

updating billing and/or patient information on a remote computer using said mobile device.

9 (previously presented): The method of claim 8, wherein further said implantable nerve stimulation device is adapted to be in contact with a nerve tissue, and comprises an implanted stimulus-receiver module and an implanted pulse generator (IPG) module.

10 (previously presented): The method of claim 8, wherein said external interface is an external stimulator inductively coupled to the said implanted stimulator.

11 (previously presented): The method of claim 8, wherein further said remote mobile device is at least one of a modified PDA cell phone, a desk top computer, a lap-top computer, or a pocket PC/cell phone.

12 (previously presented): The method of claim 8, wherein said data exchange is exchange of data for nerve stimulation patients, comprising patient history, nerve stimulation parameters, stimulation schedules, patient reports, patient contact information, and patient insurance information.

13 (previously presented): The method of claim 8, wherein said mobile device further comprises pre-stored diagnostic codes and current procedural terminology (CPT) codes for billing, automatic invoicing, or invoice templates.

14 (previously presented): The method of claim 8, wherein further said implanted nerve stimulator device is used for providing therapy for at least one of neurological, neuropsychiatric, urological, and cardiac disorders, or intractable pain treated by spinal cord stimulation.

15 (currently amended): A system for at least one of monitoring and programming an implanted neurostimulator device, with a remote device over a wide area network, comprising:

said implantable neurostimulator comprising circuitry, at least one lead adapted for providing electrical pulses to the nerve tissue, and a coil for communication, wherein said implantable neurostimulator comprises an implantable pulse generator module and a stimulus-receiver module that receives external stimulus signals and is capable of applying said electrical pulses independently of said pulse generator module;

an external interface means for networking over a wide area network and in communication with said implantable neurostimulator;

a remote mobile device adapted with means for networking over a wide area network;

software applications means for said mobile device, configured for communicating and exchanging data over said wide area network, and to remotely change parameters of said electric pulses provided by said neurostimulator;

a software configured and adapted for storing updated patient information in said remote mobile device; and

a software configured and adapted for updating and storing billing information in a remote computer using said remote mobile device.

16 (previously presented): The system of claim 15, wherein further said neurostimulator is utilized for providing therapy for at least one of neurological, neuropsychiatric, urological, and cardiac disorders, or intractable pain treated by spinal cord stimulation.

17 (previously presented): The system of claim 15, wherein said external interface means is adapted to be inductively coupled to said implanted neurostimulator.

18 (previously presented): The system of claim 15, wherein said implantable nerve stimulation device further comprises an implanted stimulus-receiver module and an implanted pulse generation module (IPG).

19 (previously presented): The system of claim 15, wherein said external interface means further comprises an external stimulator.

20 (previously presented): The system of claim 15, wherein further said remote mobile device is at least one of a modified PDA/cell phone, a desk-top computer, a lap-top computer, an internet ready pocket PC, or an internet ready personal digital assistant.

21 (previously presented): The system of claim 15, wherein said data exchange is exchange of data relevant to nerve stimulation patients, comprising patient history, nerve stimulation parameters, stimulation schedules, patient reports, patient contact information, or patient insurance information.

22 (previously presented): The system of claim 15, wherein further said remote mobile device can store, edit, add, download, and upload said data.

23 (previously presented): The system of claim 15, wherein said mobile device further comprises pre-stored diagnostic codes and current procedural terminology (CPT) codes for billing, automatic invoicing, or invoice templates.

24 (currently amended): A system of remotely accessing patient data on a mobile device and utilizing said data to remotely control an implantable neurostimulator providing electrical pulses to a nerve tissue, comprising:

said implantable neurostimulator comprising circuitry, at least one lead adapted for providing electrical pulses to said nerve tissue, and a coil for communication; wherein said implantable neurostimulator comprises an implantable pulse generator module and a stimulus-receiver module that receives external stimulus signals and is capable of applying said electrical pulses independently of said pulse generator module;

an external interface means for networking over a wide area network, and in communication with said implantable neurostimulator;

a remote mobile device with means for networking over a wide area network; software applications means for said mobile device configured for:

i) communicating and exchanging data over said wide area network, ii) for remotely changing parameters of said electric pulses provided by said neurostimulator, and iii) for storing, editing, adding, downloading, and uploading said data; and

means for interrogating and remotely altering neurostimulation therapy programs over said wide area network.

25 (previously presented): The system of claim 24, wherein further said neurostimulator is utilized for providing therapy for at least one of neurological, neuropsychiatric, urological, and cardiac disorders, or intractable pain treated by spinal cord stimulation.

26 (previously presented): The system of claim 24, wherein said external interface means is adapted to be inductively coupled to said implanted neurostimulator.

27 (previously presented): The system of claim 24, wherein said implantable nerve stimulation device further comprises an implanted stimulus receiver module and an implanted pulse generation module (IPG).

28 (previously presented): The system of claim 24, wherein said external interface means further comprises an external stimulator.

29 (previously presented): The system of claim 24, wherein further said remote mobile device is at least one of a modified PDA/cell phone, a desk-top computer, a lap-top computer, an internet ready pocket PC, or an internet ready personal digital assistant.

30 (previously presented): The system of claim 24, wherein said data exchange is exchange of data for nerve stimulation patients, comprising patient history, nerve stimulation parameters, stimulation schedules, patient reports, patient contact information, and patient insurance information.

31 (previously presented): The system of claim 24, wherein said mobile device further comprises pre-stored diagnostic codes and current procedural terminology (CPT) codes for billing, automatic invoicing, or invoicing templates.